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ABSTRACT

A study examined relationships among communication apprehension in elementary students, teacher perception of student communication apprehension, intelligence, and reading achievement. Subjects, 244 public elementary school students aged 7-12 in grades 2-6, completed a battery of tests measuring communication apprehension, teacher perception of communication apprehension, reading achievement, and intelligence. Results only tentatively supported the assumption that teachers can and do perceive communication apprehension among children, and did not indicate a significant relationship between communication apprehension and reading achievement or intelligence. (Two tables of data are included, and 29 references are attached.) (SR)

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Relationships Among Communication Apprehension, Reading Achievement, Teacher-Perceived Communication Apprehension, and Intelligence

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Running head: COMMUNICATION APPREHENSION

Relationships Among Communication Apprehension, Reading Achievement, Teacher-Perceived Communication Apprehension, and Intelligence

Although teachers of reading continue to seek ways to improve both the affective and cognitive components of the learning environment, most are unaware of the prevalence of communication apprehension (CA) among elementary school students and any deleterious effects it may have. With current whole-language instructional processes which emphasize oral as well as written communication in reading instruction, an understanding of the nature and possible effects of communication apprehension, the fear of oral communication, becomes increasingly important. However, possible relationships among communication apprehension and factors known to affect reading achievement in elementary school students, e.g., intelligence and teacher perception, have received little research attention. The purpose of this study is to examine relationships among communication apprehension in elementary students, teacher perception of student CA, intelligence, and reading achievement.

Background

Communication Apprehension

Listed as America's number one fear (Wallechinsky, Wallace, & Wallace, 1978), communication apprehension, also labeled shyness, reticence, and speech anxiety, is found to affect 20% of college populations. This condition also has been found to affect students at the elementary, junior, and senior high school levels and senior citizens (McCroskey, 1977b). Research shows the following to be generally true of the person who experiences CA: (a) the

person will withdraw and avoid communication; (b) negative perceptions of the CA person will occur by others in the environment; (c) as a result of the combination of withdrawal and negative perceptions by others, the CA person's academic, social, economic, and political life will be negatively impacted (McCroskey, 1977b).

Various studies have explored communication apprehension in elementary grades and have found significant amounts of CA and a tendency for CA to increase as grade level progresses (e.g., Garrison & Garrison, 1979b; McCroskey, Andersen, Richmond, & Wheeless, 1981; Shaw, 1966); have explored relationships between CA and teacher perception of CA (Davey, 1975); and have compared amounts of CA in American and foreign children (Watson, Monroe, & Atterstrom, 1984; Watson, Monroe, Fayer, & Aloise, in press).

Communication Apprehension and Reading Achievement

Researchers in speech communication have explored possible relationships between communication apprehension and general academic achievement and have identified communication apprehension as a serious deterrent to learning among elementary school students (e.g., Comadena, 1985; Elliott, 1968; McCroskey, 1977a). Little research, however, has been conducted to compare CA and reading achievement. Barnes (1981) indicated that predictions of specific communication behaviors (responses, verbal communication, vocalization) cannot be made based on comparison with scores obtained from elementary school children on the CTBS Reading and Language tests. Barnes found that students who scored high (stanines 7-9) on these subtests of the CTBS did not respond, ask questions, or initiate communication more often than did students who scored low (stanines 1-3). In contrast, Merryman (1974) reported that fifth

grade students identified as having different levels of anxiety achieved differentially on measures which are closely related to the act of reading; and Davey (1976) found a strong relationship between CA and low reading achievement in freshman and sophomore high school students.

Communication Apprehension and Teacher Perception of CA

The effects of teacher perception of student learning on student achievement have been documented extensively in the literature and have been found to be both complex and powerful (e.g., Brophy, 1983; Cooper & Good, 1983). Research tends to indicate that teachers can identify communication apprehension in students (Elliott, 1968), but the effects of teacher perception of CA on student achievement, and particularly on reading achievement, are less well known. The combined effects of CA and teacher perception of CA have just begun to receive research attention. The correlation of these variables with academic achievement were examined by Watson and Monroe (1988), with little variance accounted for by either factor.

Communication Apprehension and Intelligence

Although many studies support the positive relationship of intelligence with general academic learning (e.g., Binder, Jones, & Strowig, 1970; Thorndike & Hagan, 1969) and with reading achievement (e.g., Bond & Dykstra, 1967), few studies have explored the relationship between intelligence and CA. Three studies (Bashore, 1971; McCroskey, Daly, & Sorensen, 1976; Watson & Monroe, 1988) suggest that there may be little relationship between the two variables; however, Davis and Scott (1978) found intelligence to be far more associated with achievement and CA than with CA and verbal activity.

Research Questions

To examine relationships among self-reported communication apprehension, teacher perception of student CA, intelligence, and reading achievement in elementary school students, the following research questions were posed:

1. Which set of variables best predicts reading achievement?
2. What is the relationship between each pair of variables that helps interpret the prediction equation?

Method

Sample

Data regarding level of communication apprehension, teacher perception of communication apprehensive behaviors, intelligence, and reading achievement were gathered from 244 subjects, ages 7 to 12 years in grades 2-6, attending a public elementary school.

Assessment of Communication Apprehension

The Personal Report of Communication Fear (PRCF), a 14-item self-report inventory (McCroskey et al., 1981) was used to measure levels of communication apprehension. In the development of the PRCF, reliabilities of .70 for grades K-3 and .79 for grades 4-6 were obtained (McCroskey et al., 1981). Data from the current sample yielded an alpha coefficient of .81 for the PRCF. Administration of the Measure of Elementary Communication Apprehension, a similar inventory for children, concurrently with the PRCF provided validity coefficients (Garrison & Garrison, 1979b).

Davey's (1975) Communication Apprehension Behavior Inventory (CABI) was used to record teacher perception of communication apprehension among subjects. Each student in the sample was evaluated on the CABI by his or her

homeroom teacher. An alpha coefficent of .86 was obtained for the sample.

Assessment of Intelligence and Reading Achievement

The measure of reading achievement (RA) used in the study was the scaled score on the total Reading subtest of the Comprehensive Tests of Basic Skills (CTBS) (CTB/McGraw-Hill, 1981a). Intelligence (IQ) data for all subjects were derived from the Test of Cognitive Skills (CTB/McGraw-Hill, 1981b), which was administered in conjunction with the achievement battery.

Results

Stepwise multiple regression procedures (SAS Institute, 1982) were used to investigate relationships among self-perceived communication apprehension (PRCF), teacher perception of students' communication apprehensive behaviors (CABI), intelligence (IQ), and reading achievement (CTBS-RA). Reading achievement served as the criterion variable. A stepwise regression procedure indicated that the best predictor model consisted of IQ and CABI ($R = .431$, $R^2 = .186$, $F(2,241)=49.37$, $p < .0001$), with intelligence entering the equation first and with teacher perception of CA sharing little variance with reading achievement (see Table 1). These findings indicate that a predictor model for reading achievement based on both intelligence and teacher perception of CA is only slightly better than one based on intelligence alone.

Insert Table 1 about here

Follow-up analyses consisted of Pearson product-moment correlations (SAS Institute, 1982). A correlation coefficent was computed for each pair of variables under consideration (see Table 2).

Insert Table 2 about here

Results of this investigation yielded significant correlations for the following pairs of variables:

1. Intelligence and reading achievement ($r = .421$, $p < .0001$). Intelligence is positively correlated with the index of reading achievement examined in this study.

2. Teacher perception of communication apprehension and reading achievement ($r = -.164$, $p < .0001$). The negative correlation of teacher perception of CA with reading achievement, although significant, is low.

3. Communication apprehension and teacher perception of communication apprehension ($r = .229$, $p < .001$). Student-reported CA and teacher perception of CA are significantly correlated but share little variance.

4. Teacher perception of CA and intelligence ($r = -.178$, $p < .001$). These variables are negatively correlated at a significant level but share little variance.

Although nonsignificant differences must be interpreted and generalized with caution, the researchers view the sample size to be supportive of tentative acceptance of the finding that communication apprehension is not correlated significantly with the measures of reading achievement and intelligence used in this study.

Discussion

This study explored relationships among student-reported communication apprehension, teacher perception of communication apprehension, intelligence, and reading achievement. A significant positive relationship between intelligence and reading achievement has long been accepted (e.g., Bond & Dykstra, 1967; Thorndike & Hagen, 1969); however, the impact of the remaining variables on reading achievement among elementary school students had been minimally explored.

Recent research by the authors in the area of communication apprehension (Watson & Monroe, 1988) examined correlates of overall academic achievement. The best predictor model for academic achievement was found to include only two variables, intelligence and teacher perception of communication apprehension, with the latter sharing little variance with achievement. Because of the close relationship between reading achievement and overall academic performance, a similar pattern was expected in this study. Such a pattern did emerge.

Previous research had found teacher perception of communication apprehension to correlate significantly with CA (Davey, 1975; Elliott, 1968; Garrison & Garrison, 1979a; McCroskey & Daly, 1976). This study only tentatively supports the contention that CA can be recognized by teachers. Thus only limited interpretation can be given to the role of teacher perception of communication apprehension in the predictor model for reading achievement and to the finding that teacher perception of CA and intelligence are negatively correlated at a significant level but share little variance.

The finding that student-reported CA is not significantly correlated with reading achievement fails to support the research of Comadena (1985) and Elliott (1968), who found significant negative correlations between CA and academic achievement among elementary age children, and Davey (1976), who found a strong inverse relationship between CA and reading achievement among high school students. The current study appears to support the research of Barnes (1981), who found no relationship between student-initiated communication and reading achievement in elementary school children. Further, the findings of Davis and Scott (1978) and Garrison, Seiler, and Boohar (1977), who found no significant relationship between CA and academic achievement among college students, are supported by the current study.

The growing body of literature on the relationship between communication apprehension and intelligence favors the contention that CA and intelligence are not significantly correlated (Bashore, 1971; McCroskey, Daly, & Sorensen, 1976; Watson & Monroe, 1988). Findings of the current study are in agreement with this research.

The current study only tentatively supports the assumption that teachers can and do perceive CA among children, and it does not indicate a significant relationship between CA and reading achievement. It must be noted that the reading test administered for this study was a test of silent reading. There may be differences between this evaluation and the teacher's evaluation of reading achievement in the elementary classroom, e.g., evaluation of responses in a reading group in which oral reading is expected. The strong likelihood exists that some students will be communication apprehensive, and the teacher may or may not be able to identify these students. Therefore, teachers need

to monitor their treatment of all students in reading groups to promote active reading involvement while providing a supportive environment for oral communication. Further study is needed to determine if teachers can perceive CA among students and which modifications in reading instruction would be helpful in alleviating CA.

Although this study does not indicate a significant relationship between CA and reading achievement in children, grades 2-6, the limited research available tends to support a correlation between the variables CA and RA for high school students (Davey, 1976) and the variables CA and academic achievement in college students (McCroskey, 1977a). From the findings of these studies the inference may be explored that as CA individuals mature, CA has more effect on achievement. The possibility of CA as a developmental phenomenon within a culture is indicated by the work of Watson, Monroe, and Atterstrom (1984) and Watson, Monroe, Fayer, and Aloise (in press). If such is the case, elementary students exhibiting CA should be helped to resolve their apprehensions to avoid the possible cumulative effects of CA. The need for further study of these variables on a longitudinal basis is indicated.

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Table 1

Stepwise Multiple Regression Procedure with Reading Achievement (CTBS-RA) as the Criterion Variable

Variable	Multiple R	R^2	R change	p
IQ	.421	.177	.177	<.0001
CABI	.431	.186	.009	<.0001

Table 2

Pearson Product-Moment Correlation Coefficient Matrix

Variable	IQ	CABI	PRCF
RA	.421**	-.164**	-.016
IQ		-.178*	.062
CABI			.229*

Note. CTBS-RA is the reading achievement total on the Comprehensive Tests of Basic Skills; PRCF is the Personal Report of Communication Fear, a self-report measure of communication apprehension; CABI is Communication Apprehension Behavior Inventory, a record of teacher perception of communication apprehensive behaviors; and IQ is intelligence as measured by the Test of Cognitive Skills.

*$p < .001$
**$p < .0001$